

REMARKS

Claims 1, 3, 5, 6, 8, and 9 are pending. Claims 2, 4, 7, and 10 have been canceled without prejudice. Claims 1, 3, 5, 6, 8, and 9 have been amended. No new matter has been introduced. Reexamination and reconsideration of the present application are respectfully requested.

In the September 23, 2003 Office Action, the Examiner rejected claims 1-10. The Examiner rejected claims 1-10 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,959,265 to Van Ligten (the Van Ligten reference). This rejection is respectfully traversed.

The present invention relates to a sound radiating structure including a plurality of hollow members each defining an inner cavity along the length of the hollow member. Each of the hollow members has an open end and a closed end. Each of the hollow members also has a side opening in its side wall. When sound is input to the sound radiating structure, the sound radiating structure re-radiates various sound waves through the open ends and side openings of the hollow members together with the reflected sound waves.

Independent claim 1, as amended, recites:

a plurality of cavity-defining members, each of said cavity-defining members being of a hollow shape to define an inner cavity that extends in a particular direction, the inner cavity defined by each of said cavity-defining members having a length in the particular direction different from lengths of inner cavities defined by other said cavity-defining members,

the inner cavities defined by said cavity-defining members being located

adjacent to each other such that *the cavity-defining members are disposed so as to adjoin each other perpendicularly to the particular direction in which the inner cavities defined thereby extend*, each of said cavity-defining members includes an open end and a closed end such that the open end and the closed end of each of said adjacent cavity-defined members are staggered, and each of said cavity-defining members includes a side portion extending along the particular direction, and *the side portion includes a side opening formed therein at a position of three-quarters of the length from the open end and communicating with the inner cavity defined by each of said cavity-defining members*,

wherein when a sound wave is input to said sound radiating structure, each of said cavity-defining members re-radiates the sound wave by resonance.

The Van Ligten reference is directed to a sound absorber having a large number of tubular resonators whose sound orifices are adjacent to a common surface and are distributed in such a way that the interaction zones of these individual sound orifices are distributed as far as possible over the whole surface and at the same time do not substantially overlap. Preferred embodiments consist of extruded plastic shaped parts or of metallic shaped parts that are firmly connected to one another and have suitable mechanical rigidity and acoustic hardness.

The Van Ligten reference does not disclose, teach, or suggest the structure of independent claim 1, as amended. Unlike independent claim 1, as amended, the Van Ligten does not disclose inner cavities defined by said cavity-defining members being located adjacent to each other such that *the cavity-defining members are disposed so as to adjoin each other perpendicularly to the particular direction in which the inner*

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cavities defined thereby extend, each of said cavity-defining members includes an open end and a closed end such that the open end and the closed end of each of said adjacent cavity-defined members are staggered, and each of said cavity-defining members includes a side portion extending along the particular direction, and the side portion includes a side opening formed therein at a position of three-quarters of the length from the open end and communicating with the inner cavity defined by each of said cavity-defining members. The Van Ligten reference is directed to a sound absorber for a motor vehicle, and the *sound radiating structure* of independent claim 1, as amended, is different as it *re-radiates sound waves by resonance* (i.e., scattering sound). Sound absorption is not an object of the present invention, and it is actually undesirable (see Specification, page 2, lines 15-22; and page 40, lines 1-3).

The Van Ligten reference fails to show inner cavities defined by said cavity-defining members being located adjacent to each other such that *the cavity-defining members are disposed so as to adjoin each other perpendicularly to the particular direction in which the inner cavities defined thereby extend, each of said cavity-defining members includes an open end and a closed end such that the open end and the closed end of each of said adjacent cavity-defined members are staggered*, as recited in independent claim 1, as amended. The Van Ligten reference only teaches, e.g., in Fig. 3a, a flat sound absorber in which multiple joined rectangular hollow members have a square orifice on a top face of each hollow member and have closed ends (col. 4, lines 40-48; and Fig. 3a).

The Van Ligten reference does not make mention of said cavity-defining members including a side portion extending along the particular direction, and *the side*

portion includes a side opening formed therein at a position of three-quarters of the length from the open end and communicating with the inner cavity defined by each of said cavity-defining members, as recited in independent claim 1, as amended. The Van Ligten reference only shows a sound absorber having hollow members in which orifices are placed on the bodies of the hollow members, and there is no mention at all of providing a side opening formed in a side portion of the cavity-defining member at a position of three-quarters of the length from the open end and communicating with the inner cavity defined by each of said cavity-defining members, as recited in independent claim 1, as amended. Accordingly, applicants respectfully submit that independent claim 1, as amended, distinguishes over the above-cited reference.

Independent claim 9, as amended, recites limitations similar to independent claim 1, as amended. Claims 3, 5, 6, and 8 all directly depend from independent claim 1, as amended. Accordingly, applicants respectfully submit that claims 3, 5, 6, 8, and 9 distinguish over the above-cited reference for the reasons set forth above with respect to independent claim 1, as amended.

Please replace the drawing figures with formal drawing Figs. 1-36 enclosed herewith.

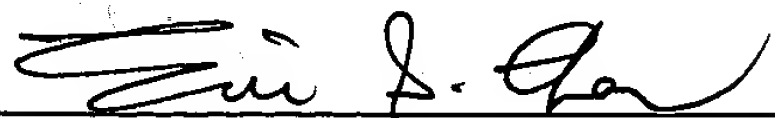
Applicants believe that the foregoing amendments place the application in condition for allowance, and a favorable action is respectfully requested. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call either of the undersigned attorneys at the Los Angeles telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a

telephone conference would advance prosecution of the application.

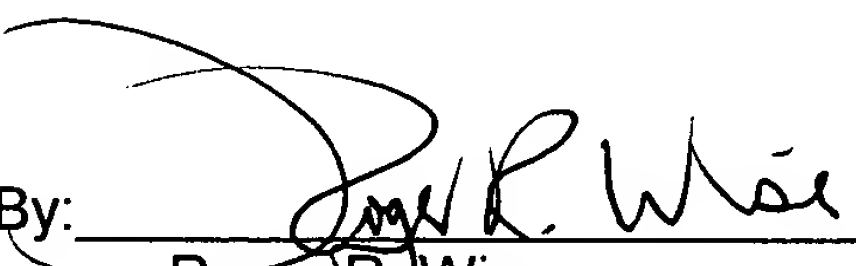
Respectfully submitted,

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE DRAWINGS:

Please replace the drawing figures with formal drawing Figs. 1-36 enclosed herewith.

IN THE CLAIMS:

Please cancel claims 2, 4, 7, and 10 without prejudice; and amend claims 1, 3, 5, 6, 8, and 9 as follows:

1. (Amended) A sound radiating structure, comprising:

a plurality of cavity-defining members, each of said cavity-defining members being of a hollow shape to define an inner cavity that extends in a particular direction, the inner cavity defined by each of said cavity-defining members having a length in the particular direction different from lengths of [the] inner cavities defined by other said cavity-defining members, [the inner cavity defined by each of said cavity-defining members opening outwardly at least one of opposite ends of said cavity-defining member,]

the inner cavities defined by said cavity-defining members being located adjacent to each other such that the cavity-defining members are disposed so as to adjoin each other perpendicularly to the particular direction in which the inner cavities defined thereby extend, each of said cavity-defining members includes an open end and a closed end such that the open end and the closed end of each of said adjacent cavity-defined members are staggered, and each of said

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cavity-defining members includes a side portion extending along the particular direction, and the side portion includes a side opening formed therein at a position of three-quarters of the length from the open end and communicating with the inner cavity defined by each of said cavity-defining members,

wherein when a sound wave is input to said sound radiating structure, each of said cavity-defining members re-radiates the sound wave by resonance.

3. (Amended) A sound radiating structure as claimed in claim 1, [which further comprises] further including a support panel on which said plurality of cavity-defining members are supported.

5. (Amended) A sound radiating structure as claimed in claim 1, [where the inner cavity defined by each of said cavity-defining members opens outwardly at the opposite ends of said cavity-defining member, and] wherein each of said cavity-defining members includes a detachable closure provided at [least one of the opposite ends for closing] the closed end to close the inner cavity [at the at least one end].

6. (Amended) A sound radiating structure as claimed in [in] claim 1, wherein each of said cavity-defining members is constructed in such a manner that the inner cavity defined thereby is adjustable in the length in the particular direction.

8. (Amended) A sound radiating structure as claimed in claim [7] 1, wherein the side portion of each of said cavity-defining members has a flat outer

surface, and said plurality of cavity-defining members are disposed in such a manner that [the] flat outer surfaces of [the] side portions in said plurality of cavity-defining members together constitute a single substantially-continuous flat outer surface of said sound radiating structure.

9. (Amended) An acoustic room, comprising:

a sound radiating structure [as recited in claim 1] having

a plurality of cavity-defining members, each of said cavity-defining members being of a hollow shape to define an inner cavity that extends in a particular direction, the inner cavity defined by each of said cavity-defining members having a length in the particular direction different from lengths of inner cavities defined by other said cavity-defining members,

the inner cavities defined by said cavity-defining members being located adjacent to each other such that the cavity-defining members are disposed so as to adjoin each other perpendicularly to the particular direction in which the inner cavities defined thereby extend, each of said cavity-defining members includes an open end and a closed end such that the open end and the closed end of each of said adjacent cavity-defined members are staggered, and each of said cavity-defining members includes a side portion extending along the particular direction, and the side portion includes a side opening formed therein at a position of three-quarters of the length from the open end and communicating with the inner cavity defined by each of said cavity-defining member,

wherein when a sound wave is input to said sound radiating
structure, each of said cavity-defining members re-radiates the sound
wave by resonance; and

an inner wall surface or ceiling surface for installation thereon of said
sound radiating structure.